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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

9311 GROH ROAD

GROSSE ILE, MI 48138

17 FEB 2011

MEMORANDUM

SUBJECT: **ACTION MEMORANDUM:** Request for Approval of an Emergency Action at the Canterbury Mercury Spill Site, Ann Arbor, Washtenaw County, Michigan (Site ID # C405)

FROM: Jeffrey A. Lippert, On-Scene Coordinator
Emergency Response Branch 1 – Response Section 2

THRU: Beverly Kush, Chief
Response Section 2

TO: Jason H. El-Zein, Chief
Emergency Response Branch 1

I. PURPOSE

This memorandum is to request and document your approval for expending up to \$25,000 to abate a potential imminent and substantial threat to public health, welfare, and the environment posed by the Canterbury Mercury Spill Site (Site) in Ann Arbor, Michigan, and to document your verbal authorization of \$10,000 to initiate the emergency response action. This response action was necessary to mitigate the immediate threat to public health, welfare, and the environment posed by the release of elemental mercury in a residential neighborhood.

This emergency response action was conducted pursuant to Section 104(a)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 42 U.S.C. § 9604(a)(1), as amended, and consisted of locating, recovering, and removing mercury spilled in a residential area. Off-site disposal of the mercury and mercury-contaminated media (debris, personal protective equipment, etc.) was also completed. The On-Scene Coordinator (OSC) initiated the response and requested approval to expend up to \$10,000 from Branch Chief Jason El-Zein. This request was based on a hazardous substance release and the Ann Arbor Fire Department's (AAFD) request for United States Environmental Protection Agency (U.S. EPA) assistance. The cleanup required 3 days to complete, final disposal occurred on January 18, 2011.

The Canterbury Mercury Spill Site is not on the National Priorities List (NPL).

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID #MIN000510539

Redacted

A. Physical location and Site Characteristics

The Site is located at Canterbury Street in Ann Arbor, Washtenaw County, Michigan 48104. The geographical coordinates for the Site are Latitude **Non-Responsive** North and Longitude **Non-Responsive**° West. The Site is a residential property located in an suburban area of Washtenaw County, Michigan.

The area surrounding the Canterbury Mercury Spill Site was screened for Environmental Justice (EJ) concerns using Region 5's EJ Assist Tool (which applies the interim version of the national EJ Strategic Enforcement Assessment Tool (EJSEAT)). Census tracts with a score of 1, 2, or 3 are considered to be high-priority potential EJ areas of concern according to EPA Region 5. The Canterbury Mercury Spill Site is in a census tract with a score of 7 (Attachment A). Therefore, Region 5 does not consider this site to be a high-priority potential EJ area of concern. Please refer to the attached analysis map for additional information.

B. Site Background and Site Evaluation

According to the AAFD, the spill occurred on December 30, 2010 in a residential home when a clock weight from a grandfather clock containing approximately a half cup of mercury was spilled. Hundreds of beads of mercury were observed on the floor and the carpet and a nearby heat vent was impacted. The AAFD evacuated the residents, opened the windows, and shut down the heat in the house. The AAFD notified the City of Ann Arbor's Environmental Coordinator and Washtenaw County Health Department (WCHD). The same day, the AAFD requested assistance from U.S. EPA in addressing visible elemental mercury spilled inside a residential home, which had the potential to be tracked outside and into additional homes.

On December 31, 2010, U.S. EPA responded to the site and entered the home. Initial mercury screening results by U.S. EPA found mercury levels above 15,000 nanograms per cubic meter (ng/m³) in the breathing zone. The WCHD recommended a cleanup level of 1000 ng/m³ in the house. U.S. EPA also observed and documented approximately 10 pounds of spilled elemental mercury on the carpet and in a heat vent in the living room.

After the initial assessment U.S. EPA vacuumed the affected area, removed contaminated items, carpet and padding, and placed them in 55-gallon drums for future disposal. Additional actions included vacuuming the floor below the carpet, washing the floor with HgX solution, heating and venting the affected area, and applying non-mercury containing sealant in the heating duct. Elemental mercury waste was transported off-site for disposal on January 7, 2011. Mercury-contaminated debris was sampled and staged on-site until disposal approval was obtained; it was transported off-site for disposal on January 18, 2011.

C. Current Situation

The emergency response actions were completed on January 7, 2011. Final disposal of

the mercury-contaminated waste was completed on January 18, 2011.

III. THREATS TO PUBLIC HEALTH, WELFARE, OR TO THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

The conditions at the Site presented a release or a threatened release of a CERCLA hazardous substance, and met the criteria for an emergency response provided for in the National Contingency Plan (NCP), 40 CFR § 300.415 (b) (2). These criteria included the following:

- i ☒ YES ☐ NO Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants;

This factor was present at the Site due to the presence of visible elemental mercury in the home, which could have been tracked outside and into additional homes;

- ii ☒ YES ☐ NO The availability of other federal or state response mechanisms to respond to the release;

No other local, state, or federal agency was in the position or had the resources to independently implement an effective response action. The AAFD requested U.S. EPA assistance.

IV. ENDANGERMENT DETERMINATION

Given the Site conditions, the nature of the hazardous substance on-site, and the potential exposure pathways described in Section II and III above, actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response actions selected in this Action Memorandum, may have presented an imminent and substantial endangerment to public health, welfare, or the environment.

V. PROPOSED ACTIONS & ESTIMATED COSTS

A. Proposed Action

The OSC has completed or will complete the following emergency removal actions to mitigate threats posed by the presence of mercury:

☒ Develop and implement a site health and safety plan;

☐ Provide site security measure and restriction to the hazardous substances on site;

☒ Secure, stage, sample and characterize wastes;

- ☒ Transport and dispose of all hazardous wastes, pollutants and contaminants at an EPA approved facility in accordance with EPA off-site rule 40 CFR 300.440;
- ☐ Analytical/Confirmation samples
- ☐ Restoration
- ☒ Other – Air monitoring to ensure safe levels of mercury vapor for rehabilitation

The emergency response required three on-site working days to complete.

Applicable or Relevant and Appropriate Requirements

This cleanup was conducted as an emergency response. U.S. EPA verbally attempted to identify ARARs. Identified ARARs were complied with to the extent practicable.

Post-Removal Site Control

In accordance with Section 300.415(l) of the NCP, U.S. EPA will pursue appropriate arrangements for post-removal site controls to ensure the long-term integrity of the removal. Removal of the mercury is expected to eliminate the need for post-removal site controls.

Off-Site Rule

All hazardous substances, pollutants, or contaminants removed off-site pursuant to this emergency response for treatment, storage, and disposal was treated, stored, or disposed of at a facility in compliance with the U.S. EPA Off-Site Rule, 40 C.F.R. § 300.440.

Disproportionate Finding

The response actions described in this memorandum directly addressed the actual or threatened release at the Site of a hazardous substance, or of a pollutant, or of a contaminant, which may have posed an imminent and substantial endangerment to public health, welfare, or the environment. These response actions did not impose a burden on affected property disproportionate to the extent to which that property contributed to the conditions being addressed.

B. Estimated Costs

The following cost estimates include costs associated with the emergency response action for purposes of creating a total project ceiling. The costs do not include any past or future investigation costs on the Site.

Regional Removal Allowance Costs

Cleanup Contractor Costs \$ 20,000

Other Extramural Cost Not Funded from the Regional Allowance:

START \$ 5,000

Subtotal, Extramural Subtotal \$ 25,000

TOTAL, Removal Action Project Ceiling \$ 25,000

VI. EXPECTED CHANGE IN THE SITUATIONS SHOULD ACTION BE DELAYED OR NOT TAKEN

Given the Site conditions, the nature of the hazardous substances documented on-site, and the potential exposure pathways to nearby populations described in Sections II and III, actual or threatened release of hazardous substances from the Site, if not addressed by implementing the response actions selected in this Action Memorandum, would have presented an imminent and substantial endangerment to public health, welfare, or the environment.

VII. OUTSTANDING POLICY ISSUES

The following remaining policy issues are associated with the site:

√ None

VIII. ENFORCEMENT

The total EPA costs for this removal action based on full-cost accounting practices that will be eligible for cost recover are estimated to be \$47,200.¹

$$(25,000 + 4,000) = \$29,000 + (62.76\% \times 29,000) = \$47,200 \text{ (rounded)}$$

For administrative purposes, information concerning the enforcement strategy for this site is contained in the Enforcement Confidential Addendum.

¹ Direct Costs include direct extramural costs and direct intramural costs. Indirect costs are calculated based on an estimated indirect cost rate expressed as a percentage of site-specific direct costs, consistent with the full cost accounting methodology effective October 2, 2000. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

IX. RECOMMENDATION

This decision document represents the selected remedy for the Canterbury Mercury Spill Site, Ann Arbor, Michigan, developed in accordance with CERCLA as amended, and not inconsistent with the NCP. Conditions at the Site met the NCP section 300.415 (b) (2) criteria for an emergency response and I recommend your approval.

The total emergency response project ceiling if approved will be \$25,000. Of this, an estimated \$20,000 may be used for cleanup contractor costs. You may indicate your decision by signing below.

APPROVE: Beverly Kwak for JEE DATE: 2/17/11
Jason H. El-Zein, Chief
Emergency Response Branch 1

DISAPPROVE: _____ DATE: _____
Jason H. El-Zein, Chief
Emergency Response Branch 1

Enforcement Addendum

1. Administrative Record Index
2. Region 5 EJ Analysis

cc: David Chung, U.S. EPA, 5104A
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ENFORCEMENT CONFIDENTIAL ADDENDUM

CANTERBURY MERCURY SPILL SITE
ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

JANUARY 2011

(REDACTED 1 PAGE)

ENFORCEMENT CONFIDENTIAL
NOT SUBJECT TO DISCOVERY



U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ADMINISTRATIVE RECORD
FOR
CANTERBURY MERCURY SPILL SITE
ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

ORIGINAL
FEBRUARY 17, 2011

<u>NO.</u>	<u>DATE</u>	<u>AUTHOR</u>	<u>RECIPIENT</u>	<u>TITLE/DESCRIPTION</u>	<u>PAGES</u>
1	04/00/99	ATSDR	File	ATSDR ToxFAQs Sheet for Mercury CAS #7439-97-6 (SDMS ID: 348218)	2
2	12/18/07	National Institute for Occupational Safety & Health	File	Web Page - NIOSH Pocket Guide to Chemical Hazards: Mercury Compounds [Except (Organo) Alkyls] (as Hg) (SDMS ID: 374702)	2
3	12/30/10	Kremarik, J., Washtenaw County Environmental Health Dept.	Lippert, J., U.S. EPA	E-mail Message re: Washtenaw County Envi- ronmental Health Dept. Guidance Concerning Domestic Mercury Spills (SDMS ID: 374703)	1
4	02/17/11	Lippert, J., U.S. EPA	El-Zein, J., U.S. EPA	Action Memorandum: Canterbury Mercury Spill Site (PORTIONS OF THIS DO- CUMENT HAVE BEEN REDACTED/ SDMS ID: 374701)	9

ATTACHMENT 2
U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL ACTION

ENVIRONMENTAL JUSTICE SURVEY
FOR
CANTERBURY MERCURY SPILL SITE
ANN ARBOR, WASHTENAW COUNTY, MICHIGAN

ORIGINAL
JANUARY 2011

Canterbury Mercury Spill Site Map Showing EJ SEAT Values For Surrounding Area

